

Installing and Testing JMonkeyEngine (jME)

Andrew Davison, ad@fivedots.coe.psu.ac.th

July 31st 2014



This document is to help students in 242-515 *Animation and Game Development (AGD)* install the jMonkeyEngine (jME) game engine.

The Windows 32-bit version of jME can be found at the course's website:

http://fivedots.coe.psu.ac.th/Software.coe/242-515_AGD/software/

Other versions, for Windows 64-bit, Linux (32/64-bit) and Mac OSX, can be obtained from the jME website:

<http://hub.jmonkeyengine.org/downloads/>

1. Before Installing jME

jME is a Java game engine, so install Java first (version 6 or later). You can find the Java SE Development Kit 7 at:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html>

jME requires your machine to support at least OpenGL 2.0. You can test this by installing GLView from the course's website (glview405.exe). My Windows 7 test machine supports OpenGL 2.1, as shown in Figure 1.

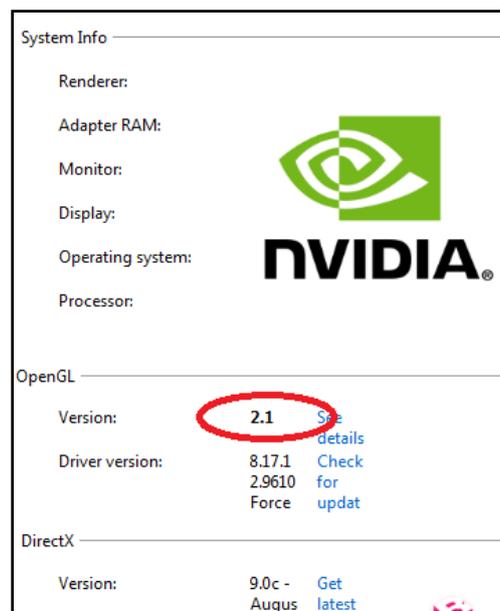


Figure 1. GLView Output.

Installing and Testing jME

If GLView reports that the version of OpenGL is less than 2.0, then you can usually fix matters by downloading a more recent driver for your machine's graphics card (which you can do via GLView).

2. Installing jME

The jME installation on Windows will usually create a new directory at `C:\Program Files\jmonkeyplatform\`, which you should check.

It is useful if you unzip `jmonkeyplatform\jmonkeyplatform\libs\jMonkeyEngine3-javadoc.zip` (which contains the jME documentation), and save the contents in a new directory (e.g. `javadocs\`).

The jME installer is large (around 500 MB) because it installs an IDE for jME built on top of NetBeans. I will not be using the IDE, but if you want to, then it is explained in the *jMonkeyEngine 3.0 Beginner's Guide* textbook. One issue is that you will need to set up its network proxy settings to get through the CoE firewall. You do this via the menu `Tools > Options > General`.

3. Testing jME

The course website contains a directory holding my jME examples:

```
http://fivedots.coe.psu.ac.th/Software.coe/242-515\_AGD/jME\_Code/
```

Download four files: two batch files (`compile.bat` and `run.bat`), the `HelloJME3.java` example, and the `logging.properties` text file.

`compile.bat` and `run.bat` both uses a classpath setting:

```
-cp "C:\Program Files\jmonkeyplatform\jmonkeyplatform\libs\*;. "
```

Make sure the path matches the location of jME on your machine.

Compile `HelloJME.java` with `compile.bat`:

```
compile HelloJME3.java
```

Execute it with `run.bat`:

```
run HelloJME3
```

The JME settings dialog window should (may) appear, similar to the one in Figure 2.

Installing and Testing jME

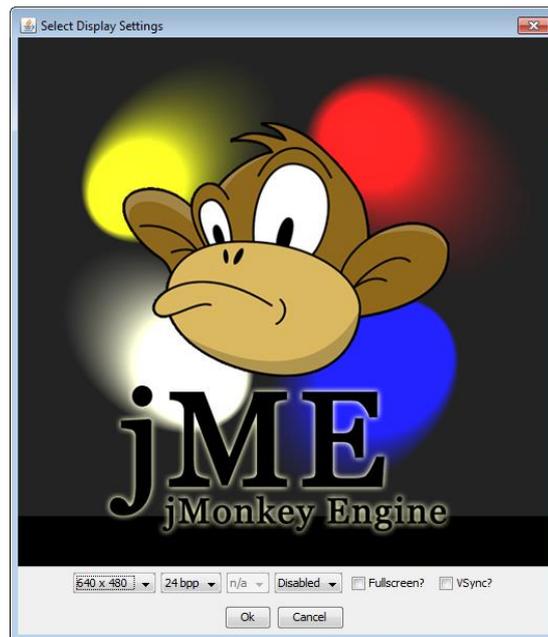


Figure 2. The jME Settings Dialog.

It can be used to change the application's window size, but usually you press the "Ok" button so the application can start. The executing HelloJME3 program is shown in Figure 3.

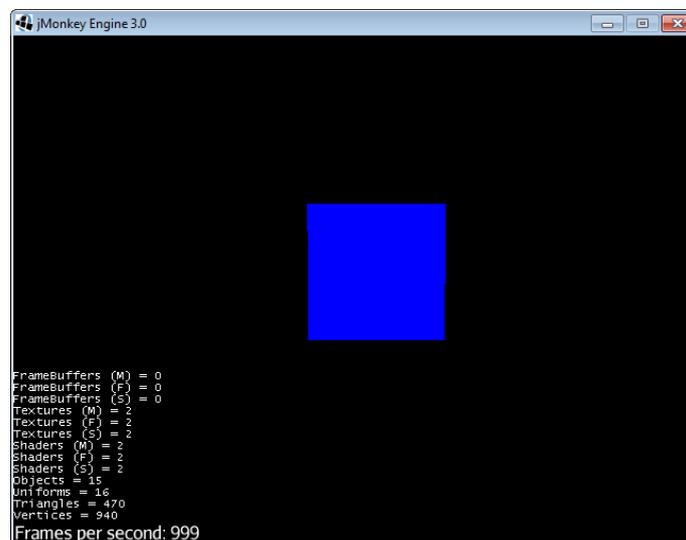


Figure 3. The Executing HelloJME3.

Moving the mouse causes the blue square to move about inside the window. The only way to terminate the program is by typing <ESC>, since the mouse cannot be used to select the window's close box.

4. Making jME Less Verbose

When I was testing the examples, jME kept producing a lot of information messages on the command line. These soon became irritating because they hid a program's actual output. An example of the output is shown in Figure 4.

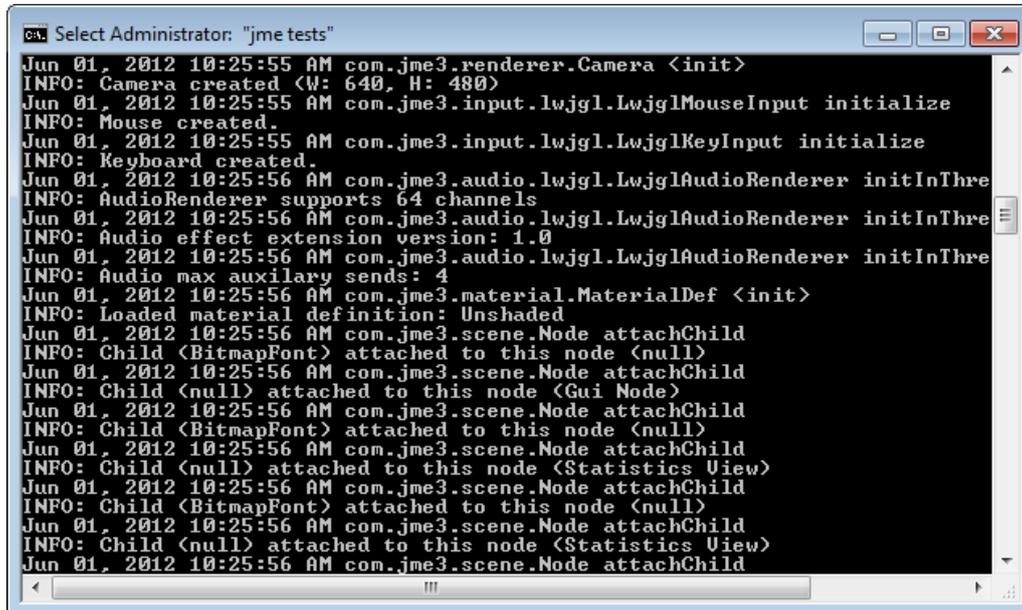


Figure 4. Lots of jME Information Messages.

You will **not** be seeing these messages, since I changed jME's message logging settings. I added the following command line option to the call to java in run.bat

```
-Djava.util.logging.config.file=logging.properties
```

This specifies that jME should use the logging settings in the `logging.properties` text file. That file adjusts jME's logging so that only warning and error messages are sent to the screen, not the massive number of information messages.

Another jME irritation is that the settings dialog window always appears before the program starts. Most of the time, the dialog is unnecessary, only slowing things down while the user presses the "Ok" button. There is a simple way of disabling the settings window, by adding a line of code to the `main()` method in the application:

```
app.setShowSettings(false);
```

I've already added the line to `HelloJME3.java`, but it's currently commented out.

5. jME Problems

Installing and Testing jME

I've noticed two problems when running beta version of jME (v3 SDK Beta 1) on Windows. The first is that the closing of a jME program can sometimes cause the JVM to crash. When it happens, the message box shown in Figure 5 appears.

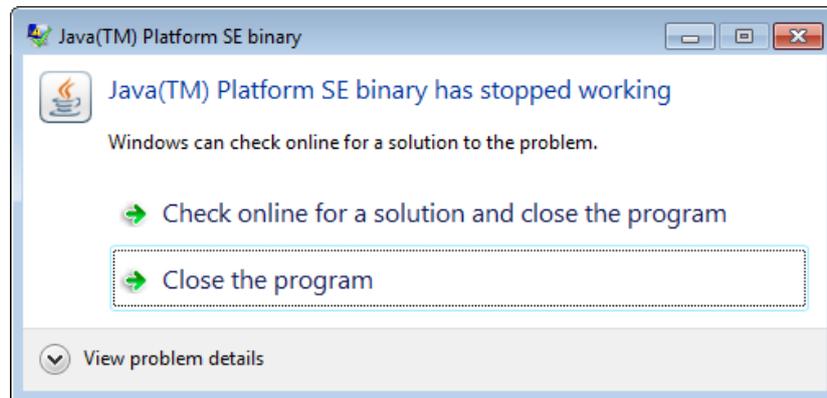


Figure 5. JVM Crash Message Box.

The jME program has successfully terminated at this point, so the simplest thing is to press the "Close the program" button to allow the JVM to tidy up and finish as well.

The other problem is that jME always issues the following warning message when it starts:

```
WARNING: Working directory is not writable. Using home directory instead.
```

This has no effect on the running of the program, so can be ignored.